

WHAT IS CLAIMED IS:

1                   1. In a storage area network having a plurality of virtual storage  
2 volumes available to a user for use in storage and retrieval of user data, a system for  
3 managing the plurality of virtual storage volumes comprising:

4                   a plurality of storage devices, the plurality of storage devices  
5 comprising first and second sets of storage devices, wherein the first set of storage  
6 devices is of a type different than the second set of storage devices; and

7                   a controller for automatically allocating at least two of the plurality  
8 of storage devices to a pool and linking at least one of the plurality of virtual storage  
9 volumes to the pool, wherein the controller partitions and concatenates the at least  
10 two of the plurality of storage devices for storage of user data thereto and retrieval  
11 of user data therefrom.

1                   2. The system of claim 1 wherein the plurality of storage devices  
2 comprises at least one physical disk.

1                   3. The system of claim 1 wherein the plurality of storage devices  
2 comprises at least one redundant array of independent disks.

1                   4. The system of claim 3 wherein the plurality of storage devices  
2 comprises at least one virtual storage volume.

1                   5. The system of claim 4 wherein the at least one virtual storage  
2 volume comprises at least one virtual disk.

1                   6. In a storage area network having a plurality of virtual storage  
2 volumes available to a user for use in storage and retrieval of user data, a method  
3 for managing the plurality of virtual storage volumes comprising:

4                   providing a plurality of storage devices, the plurality of storage  
5 devices comprising first and second sets of storage devices, wherein the first set of  
6 storage devices is of a type different than the second set of storage devices; and

7 providing a controller for automatically allocating at least two of the  
8 plurality of storage devices to a pool and linking at least one of the plurality of  
9 virtual storage volumes to the pool, wherein the controller partitions and  
10 concatenates the at least two of the plurality of storage devices for storage of user  
11 data thereto and retrieval of user data therefrom.

1 7. The method of claim 6 wherein the plurality of storage devices  
2 comprises at least one physical disk.

1 8. The method of claim 6 wherein the plurality of storage devices  
2 comprises at least one redundant array of independent disks.

1 9. The method of claim 8 wherein the plurality of storage devices  
2 comprises at least one virtual storage volume.

1 10. The method of claim 9 wherein the at least one virtual storage  
2 volume comprises at least one virtual disk.

1 11. A virtual volume management system comprising:  
2 a storage area network comprising a plurality of storage devices and  
3 a plurality of virtual storage volumes available to a user for use in storage and  
4 retrieval of user data, the plurality of storage devices comprising first and second  
5 sets of storage devices, wherein the first set of storage devices is of a type different  
6 than the second set of storage devices;  
7 a storage pool linked to at least one of the plurality of virtual storage  
8 volumes; and  
9 a controller for automatically allocating at least two of the plurality  
10 of storage devices to the pool, wherein the controller partitions and concatenates the  
11 at least two of the plurality of storage devices for storage of user data thereto and  
12 retrieval of user data therefrom.

1 12. The system of claim 11 wherein the plurality of storage devices  
2 comprises at least one physical disk.

1                   13. The system of claim 11 wherein the plurality of storage devices  
2 comprises at least one redundant array of independent disks.

1                   14. The system of claim 13 wherein the plurality of storage devices  
2 comprises at least one virtual storage volume.

1                   15 The system of claim 14 wherein the at least one virtual storage  
2 volume comprises at least one virtual disk.

1                   16. A virtual volume management method comprising:  
2                   providing a storage area network comprising a plurality of storage  
3 devices and a plurality of virtual storage volumes available to a user for use in  
4 storage and retrieval of user data, the plurality of storage devices comprising first  
5 and second sets of storage devices, wherein the first set of storage devices is of a  
6 type different than the second set of storage devices;  
7                   providing a storage pool linked to at least one of the plurality of  
8 virtual storage volumes; and  
9                   providing a controller for automatically allocating at least two of the  
10 plurality of storage devices to the pool, wherein the controller partitions and  
11 concatenates the at least two of the plurality of storage devices for storage of user  
12 data thereto and retrieval of user data therefrom.

1                   17. The method of claim 16 wherein the plurality of storage devices  
2 comprises at least one physical disk.

1                   18. The method of claim 16 wherein the plurality of storage devices  
2 comprises at least one redundant array of independent disks.

1                   19. The method of claim 18 wherein the plurality of storage devices  
2 comprises at least one virtual storage volume.

- 1                    20 The method of claim 19 wherein the at least one virtual storage
- 2       volume comprises at least one virtual disk.